

ABSTRACT

The invention is a test apparatus incorporating high current test pins, forced into contact with a circuit assembly under test by opposing compliant pressure pins. An advantageous test pin for low voltage, high current testing is a solid, one piece test pin. The solid test pin, when supplied with adequate contact force, provides both low resistance and low inductance. The required compliant force is applied to the test circuit, opposite and substantially in line with the solid test pin, by a compliant pressure pin. Since the test pin does not supply the compliant force, it can be designed primarily for the desired electrical parameters of the test contact. The only mechanical considerations for the conductive solid pin are the amount of desired surface contact area, the dominant mechanical parameter in setting the contact resistance, and the body dimensions, which determine the resistance and inductance of the pin itself. And since, the opposing compliant pressure pin is not part of the electrical test circuit, it can be designed for its mechanical properties alone. The advantage of the conductive pin - compliant pressure pin pair over the prior art compliant pin is that the compliant element, usually a spring, is no longer part of the test circuit. Also, a much higher contact force is achievable, resulting in significantly lower contact resistance.

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